Art Notes and Hints.

To sketch in clay is a very fascinating form of embodying one's artistic ideas, and is not perhaps sufficiently appreciated by those studying modelling in our art schools. When a student has mastered the rudiments and is fairly successful in copying from the antique, he should try his hand at sketching by way of home practice. A branch of fruit or a bold spray of flowers in relief is a good subject for sketching from nature. Such studies cleverly executed, especially in terra-cotta, should find a ready sale. There is no necessity for high finish, but truthfulness to nature is essential.

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THE ambitious student should not stop here, but should try his hand at figure sketching. Let him carefully think out an idea for a little group; for instance, a child feeding a kitten from a saucer of milk, or any such trifle. When he sees the group in his mind's eye, and not before, let him try to embody it in clay. He will be more likely to succeed if he keeps the sketches quite small at first.

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CONSTANT work only from the antique tends to cramp the ideas and stifle originality of thought and feeling. Working continually in a groove is bad in any branch of art. Besides expanding one's artistic ideas, sketching trifles in clay will be sure in time to lead to more important work, and the student will assuredly find that the taste for it grows as he becomes more skilful.

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LANDSCAPE PALETTE:

Zinc white, Ultramarine, Orient yellow, Viridian,
Raw Sienna, Raw umber, Burnt Sienna, Blue black,
Deep cadmium, Yellow ochre.

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A DARK green for foliage may be made with viridian and burnt Sienna, which may be lightened with yellow ochre. A very brilliant green may be composed of viridian, Orient yellow and white, and one inclining more to russet tones may be made from viridian, cadmium yellow and white. Good greens may also be made with viridian and raw Sienna. Blue greens may be composed of viridian and white, or viridian, white and ultramarine. Gray greens may be made by the addition of black to any of the greens already given, or with viridian, burnt Sienna and white.

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MARINE PALETTE:

Zinc white, Ultramarine, Yellow ochre,
Viridian, Aureolin, Brown madder,
Burnt Sienna, Blue black.

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FEW students realize how much perspective there is in the human form. Take the head, for instance. When drawing a full face you are inclined to look on it generally as a flat plane on which appear certain indentations and excresences. It is nothing of the kind; the head and face together are round, a fact which should never be lost sight of; for in drawing a face this roundness affects every line, and causes it to curve more or less.

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THE student is too apt to run in a groove in the matter of backgrounds. If he be so fortunate as to have a studio of his own, he is likely, in order to save trouble, to arrange a background and use it time after time. This undesirable habit is fostered by the practice almost unavoidably followed in art schools.

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A SIMPLE, inexpensive method for easily varying one's backgrounds is as follows: Have a small raised platform made on which to pose your models; let it be on castors, so that it can be moved at pleasure according to the light required to be thrown on the subject. At the back of the platform fix two upright posts one at each corner, with a cross-piece of wood at the top. This forms a framework over which can be arranged drapery of any kind, either tightly stretched across the frame or hanging in folds, according to the requirements of the case. I have seen this contrivance in use, and it answered admirably. ARTIST.

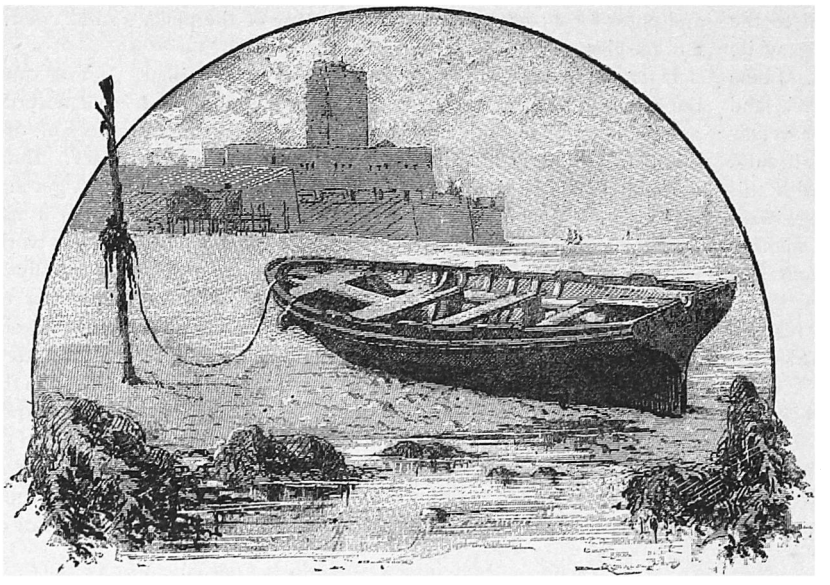
Amateur Photography.

CONDUCTED BY GEORGE G. ROCKWOOD.

EXPERIMENTS WITH THE FLASH LIGHT.

DR. PIFFARD'S valuable discovery or invention, whichever it be, is occupying the attention of the fraternity to the exclusion of almost everything else. It has come to stay. Amateurs and professionals are alike interested. The "at home" photographs are almost a "craze," and outside of the domestic circle many interesting results on a large scale have been obtained. Of one of these I can write from experience. On the occasion of the last exhibition drill of the Twelfth Regiment of the N. G., I was invited to photograph the whole regiment, band and audience, in the new Armory. A number of negatives were taken, varying in size from 4x5 to 14x17 inches. The results were all that could have been desired. And now as to how it was done. As is known, the usual quantity of magnesium burned for an ordinary parlor group is from 15 to 30 grains, and the distance is from ten to fifteen feet from the light to the group or subject. In this case there was a room two hundred feet square, a line of soldiers fully one hundred and fifty feet long, several files deep, and there were in the gallery hundreds of spectators, who were more than two hundred feet from the light. The colonel, thinking it a matter of no special importance, at the moment the pictures were to be made formed his columns fully fifty feet back of the centre line of the hall where he had agreed to form them, and upon which line the battery of five cameras was focussed, in a corner of the room in a tower. I felt that if the light was all from one point there would be a great variation in the illumination, owing to the great length of the line. Light loses its power inversely as the square of the distance. As part of the line I expected would be within fifty or sixty feet of the source of light, the end would necessarily be twice or three times that distance. So I concluded to separate the lights, extending the line of lights some 40 or 50 feet on the side of the room, and, instead of firing the entire amount of magnesium in one charge, I divided it into eight. I prepared eight large disks each about four feet in diameter, at the bottom of which were shallow pans into which I placed the cotton and magnesium, one ounce of each for each disk. This is a greater preparation of cotton than has been in use; but I concluded that such a quantity would insure complete combustion of the magnesium. I now experienced a dilemma, for upon experiment I found that an ordinary battery would not ignite the cotton. I called to my aid Mr. Smith, the electrician, and he furnished me with an ingenious apparatus for igniting the cotton. He arranged upon the back of the disks little alcohol lamps which were hinged and held in place by means of a catch, which, upon closing the circuit, was released and would let all of the lamps fall together against a little tuft of the gun-cotton which protruded back through a hole in each screen. When all was ready, the cameras having been focussed early in the evening and uncovered, a mere touch of a button closed the current and released the eight lamps, which fell against the gun-cotton, and all went off together, certainly not more than a fraction of a second apart. The light from this enormous amount of magnesium and gun-cotton, 16 ounces in all, was like a vivid flash of lightning, and so intense that all of the smaller plates were *overtimed!* I used the Stanley plates. The 14x17 was lighted just right. I see nothing to be desired in the result that was obtained. If the regiment had been out on parade in daylight we could not have done any better. I have since tried another experiment. I placed behind the disk and opposite to a little hole in the tin an ordinary candle. Between the flame and the cotton for safety I pasted a piece of silk paper; this prevented any draft carrying the flames through the aperture. Attached to the candle-holder was a finely drawn glass tube made in the form of a blow pipe; running from the tube was a small India-rubber hose upon the end of which was a bulb. Now when I wish to explode my cotton and magnesium I simply give the bulb a little pressure, which acts upon the blow pipe instantaneously, and sends the flame through the paper to the gun-cotton and gives the light with almost the speed of electricity and, of course, saves the transportation of batteries and similar apparatus. This tube is very inexpensive, and can be made of any length. In an experiment now at hand for photographing a large audience and for diffusing the light, I have had made tubes with various branches or "Y's" all running from one big bulb to the series of reflectors; so the pressure on the bulb will ignite a number of charges simultaneously. I think that the very slight difference, which is only the fraction of a second, of ignition is rather favorable than otherwise, as there is a prolongation of the illumination through the fractional part of a second.

After this experience I think it will be no difficult matter to replace the expensive electric lights that have been used recently for photographing stage tableaux, groups, etc., at some of our leading theatres. With an audience seated in amphitheatre form, as is usual, I see no reason why an entire audience should not be recorded on the plate. Before this is in type I shall have made the experiment on an audience of about two thousand people at the Cooper Institute.



FLASH LIGHT NOTES.—The Blitz-Pulver Light is a recent variation of the magnesium light. The compound is a secret, but it is claimed that none of the explosive ingredients are present. Cotton is not used, but the powder is simply ignited by a flame or torch. The light is very white and remarkably quick, but the odor of the smoke is unpleasant, indicating, I think, the presence of arsenical elements. The suggestion of Dr. Piffard to use a pistol for firing the magnesium light for instantaneous photography at home has been put into practical shape, and the article is now on sale at the trade establishments. Some recent tests in the matter of expense of burning magnesium proves that with the proper mechanical arrangements it will be much more economical than the use of electric light. The plant for the latter is very expensive, running into the thousands of dollars, and the expense of either gas or steam-engine is constant, while by the use of magnesium the plant is hardly to be considered, and the expenditure ends with the immediate use.

NIGHT LANDSCAPE PHOTOGRAPHY FOR WAR PURPOSES.—Captain Von Sothen, of the U. S. engineers, declares that the chlorate of potassium can be used with but little danger in combination with magnesium. Magnesium alone burns too slowly for actually instantaneous effects; an oxidizer is absolutely necessary for its rapid and complete combustion, and this mission chlorate of potassium fills to perfection. If used in conjunction with some other oxidizer, as manganic oxide or potassium permanganate, the amount of chlorate necessary is but small—15 per cent or three grains to a flash being quite sufficient; it should not be mixed with the magnesium until everything is ready for making an exposure. The captain says that landscape photography, in a limited sense, may be practised by means of the magnesium light, at least to the extent of securing, by its aid, extremely valuable information as to the movements and plans of an enemy. Preliminary trials with rockets carrying a quantity of the luminous mixture have been sufficiently encouraging to justify him in the belief that magnesium will play an important part in the warfare of the future for photographing, under cover of the night, an enemy's works, or determining the position of hostile forces.

KERAUNOGRAPHY is the name of that branch of the photographic art or photographic principle which impresses pictures upon the human flesh by lightning. Instances have been frequently noted where the imprints of flowers, of figures and various images and pictures have been imprinted upon the human body by a flash of lightning. The writers upon this subject have carefully estimated the velocity of the force, which they state as 240,000 miles a second. Therefore, if this force ever comes to be used as a merciful means of executing criminals, it will traverse the length of a six-foot man in one four hundred thousandth part of a second!

WEIGHT AND MEASURE EQUIVALENTS.—It has been the custom among most of the foreign writers upon photography to give weights and measures according to the metric system. To enable the reader to apply this system to the table so long in use in our own country, the following equivalents, prepared by Mr. James H. Stebbins, Jr., are given: *Weight Equivalents*—To convert grains into grams, multiply by 0.065; to convert grams into grains, multiply by 15.5; to convert drams into grams, multiply by 3.9; to convert ounces avoirdupois into grams, multiply by 28.4; to convert pounds avoirdupois into grams, multiply by 453.6. *Measure Equivalents*—To convert cubic centimetres into grains, multiply by 15.5; to convert cubic centimetres into drams, multiply by 0.26; to convert cubic centimetres into ounces avoirdupois, multiply by 0.036; to convert pints into cubic centimetres, multiply by 473; to convert litres into ounces avoirdupois, multiply by 35.3; to convert gallons into litres, multiply by 3.8.

THE CELLERIER COMPANY'S PROCESS, which was largely advertised in England as "Photography in Natural Colors," turns out to be merely a modification of the well-known "Crystoleum Process." The modus operandi is given by The Artist as follows: A carbon transparency is developed upon a waxed glass plate, and on a sheet of paper a sketch of the subject is made in colors. The two images are united, and thus give the effect of a colored photograph. When the substance with which the two parts are united is dry, the picture, being now finished, is stripped from the glass. The majority of pictures produced by this method have rather a flat look.